

The mill manufacturing team is mandated with improving operating efficiency and product quality. Optimizing control system performance is an attractive first step in achieving these goals since limited capital investment is required. The process control optimization team requires the long-term support and involvement of senior management. Knowledgeable and assertive management is required to ensure that the action items are implemented and that the economic benefits are quantified.

## Managing Pulp and Paper Process Variability

The objectives of this course are to increase the awareness of variability issues and to review the technical and organizational pathways to improvement.

### Your technical resource for improving Pulp and Paper process control performance

#### Topics covered include:

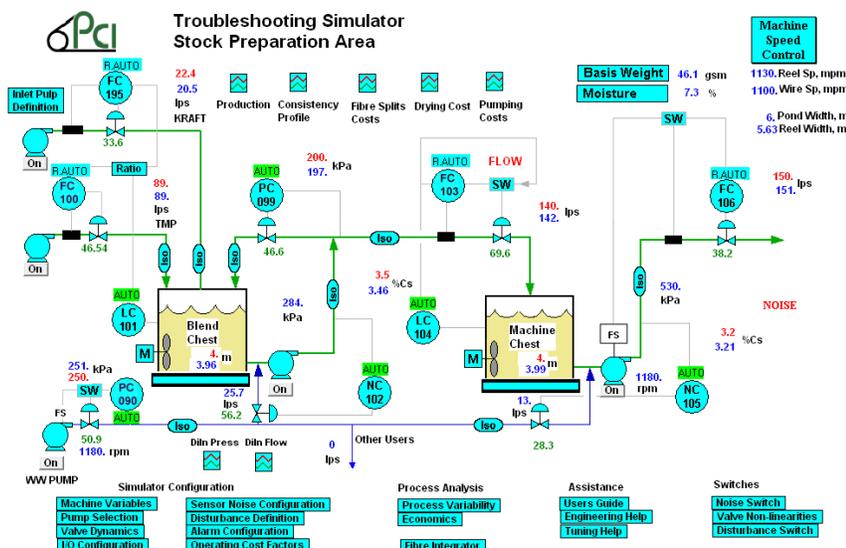
- Control loop fundamentals and terminology
- Function of the control loop
- Loop Dynamics
- Understanding Control Loop Performance
- Loop performance targets
- Analytical control loop troubleshooting procedures

#### Course Fees...

CDN	\$1000.00
USD	\$800.00

(Canadian Taxes Included.) Fees include a full set of course notes.

The course is limited to 15 participants to provide individual attention and allow our expert instructors to address specific attendee issues.



## Course Schedule

### **Lecture 1 Process variability and Control Loop performance**

8:00 – 9:30

Measuring and characterizing variability  
Calculating the economic benefits of reduced variability  
Building a successful optimization team  
Managing Variability - Technical and organizational issues,  
Eliminating roadblocks to improvement

### **Demo / lab Measuring the cost of product variability**

9:30 – 10:00

### **Lecture 2 The role of the Control Loop**

10:00 – 11:00

Control Loop Basics  
Measuring control loop performance  
Performance Targets  
What can go wrong?

### **Lecture 3 Managing Control Loop Performance**

11:00 - 12:00

Roadmap for Achieving/sustaining low variability  
Assembling an optimization team  
Optimization tools

### **Lunch Break**

### **Demo / lab Control Loop Performance and variability**

13:30- 14:00

### **Lecture 4 The role of process mixing**

14:00 –14:30

Mixing performance targets / impact on variability  
Factors that affect mixing performance

### **Demo / Lab Impact of stock chest mixing / agitation on process variability**

14:30-15:00

### **Lecture 5 Measuring the cost of process variability**

15:00 –16:00

Production benefits  
Maintenance benefits

### **Demo / Lab Benefits of reduced variability**

16:00-16:30

### **Wrap-Up and Discussion**

16:30 – 17:00

## Course Location...

The course is being held at a conference facility. Attendees are responsible for arranging their own accommodations.

## Accommodations ...

For convenience, we recommend that registrants stay at the hotel course site.

## About ProNamics...

ProNamics Control Inc. is based in Vancouver, BC. The company conducts process and control optimization surveys, prepares process simulations to establish best practices and provides a range of training courses related to process control optimization. Visit our web sites at [www.pronamicscontrol.com](http://www.pronamicscontrol.com) for more information about our services.

## About the Course ...

The course begins with a process variability overview and the management team's key role in achieving and sustaining a low variability operation.

Optimizing control performance and process mixing are highlighted as important pathways to reducing variability. Measuring the real cost of variability and the value of a variability management program is the final topic.

Approximately 30% of the course is devoted to a computer-based lab.

## Who Should Attend...

The course is designed for operations management who want to improve their ability to manage process variability. The course focuses on the economic benefits of reduced variability and identifying where resources need to be allocated. The multi-disciplinary approach to managing variability on an on-going basis is stressed.

## Instructors Include...

**Doug Nelson, P.Eng.** has over 30 years of industrial process control experience. He has extensive experience in process control training of operators, E/I techs, process control engineers and managers.

**George Jablonsky, ASCT** is a recognized expert in optimizing and troubleshooting process control performance.